FORM-PTO-1390 (Rev. 10-96)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		030705-164
		U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.5) **09/508430** To Be Assigned

INTERNATIONAL APPLICATION NO. PCT/CH98/00343	INTERNATIONAL FILING DATE 14 August 1998	PRIORITY DATE CLAIMED 15 September 1997

TITLE OF INVENTION
METHOD FOR EVALUATING DATA FROM TEXTILE FABRICS

APPLICANT(S) FOR DO/EO/US
Rudolf MEIER and Jürg UHLMANN

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.

2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.

3. [ ] This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and the PCT Articles 22 and 39(1).

4. [ ] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2))

    a. [X] is transmitted herewith (required only if not transmitted by the International Bureau).

    b. [ ] has been transmitted by the International Bureau.

    c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US)

6. [X] A translation of the International Application into English (35 U.S.C. 371(c)(2)).

7. [ ] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))

    a. [ ] are transmitted herewith (required only if not transmitted by the International Bureau).

    b. [ ] have been transmitted by the International Bureau.

    c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.

    d. [ ] have not been made and will not be made.

8. [ ] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. [X] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).

10. [ ] A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

11. [ ] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. [X] A FIRST preliminary amendment.

    [ ] A SECOND or SUBSEQUENT preliminary amendment.

14. [ ] A substitute specification.

15. [ ] A change of power of attorney and/or address letter.

16. [X] Other items or information:

Notice of Inventors' Addresses;
Six (6) Sheets of Formal Drawings; and
Copy of the German Language International Preliminary Examination Report.

(09/99)

U.S. APPLICATION NO. (If known, see 37 CFR 1.5) To Be Assigned 09/508430	INTERNATIONAL APPLICATION NO. PCT/CH98/00343	ATTORNEY'S DOCKET NUMBER 030705-164

	CALCULATIONS	PTO USE ONLY

17. [X] The following fees are submitted:

Basic National Fee (37 CFR 1.492(a)(1)-(5)):

Search Report has been prepared by the EPO or JPO $840.00 (970)

International preliminary examination fee paid to USPTO (37 CFR 1.482) $670.00 (956)
No international preliminary examination fee paid to USPTO (37 CFR 1.482)
but international search fee paid to USPTO (37 CFR 1.445(a)(2)) $690.00 (958)

Neither international preliminary examination fee (37 CFR 1.482) nor
international search fee (37 CFR 1.445(a)(2)) paid to USPTO $970.00 (960)

International preliminary examination fee paid to USPTO (37 CFR 1.482)
and all claims satisfied provisions of PCT Article 33(2)-(4) $96.00 (962)

ENTER APPROPRIATE BASIC FEE AMOUNT = $ 840.00

Surcharge of $130.00 (154) for furnishing the oath or declaration later than 20 ☐ 30 ☐
months from the earliest claimed priority date (37 CFR 1.492(e)). $

Claims	Number Filed	Number Extra	Rate		
Total Claims	9 -20 =	0	X$18.00 (966)	$ 0	
Independent Claims	1 -3 =	0	X$78.00 (964)	$ 0	
Multiple dependent claim(s) (if applicable)			+ $260.00 (968)	$	

TOTAL OF ABOVE CALCULATIONS = $ 840.00

Reduction for 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28). $ -

SUBTOTAL = $ 840.00

Processing fee of $130.00 (156) for furnishing the English translation later than 20 ☐ 30 ☐
months from the earliest claimed priority date (37 CFR 1.492(f)).   + $

TOTAL NATIONAL FEE = $ 840.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 (581) per property + $

TOTAL FEES ENCLOSED = $ 840.00

	Amount to be: refunded	$
	charged	$

a. [X] A check in the amount of $ 840.00 to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. 02-4800 in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☐ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-4800. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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17,337
REGISTRATION NUMBER

(09/99)

Patent
Attorney's Docket No. 030705-164

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of))	
Rudolf MEIER et al.)	Group Art Unit: Unassigned
)	
Application No.: To Be Assigned)	Examiner: Unassigned
)	
Filed: Concurrently Herewith)	
)	
For: METHOD FOR EVALUATING DATA)	
FROM TEXTILE FABRICS)	

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-noted application as follows:

In the Specification:

Please amend the specification as follows.

Page 2, line 2, change "items of data acquired from" to --faults which are determined in--.

Page 2, line 5, change "data" to --faults--.

Page 2, line 12, after "data" insert --on the faults--.

Page 6, line 19, after "intensity" insert --and size--.

In the Claims:

Please cancel claim 6 without prejudice or waiver to the subject matter recited therein.

Please amend the claims as follows:

1. (Amended) Method for evaluating [data] <u>faults</u> determined on textile fabrics (1), characterized in that the [data] <u>faults</u> are determined on a swatch (3a, 3b) of the surface of the fabric, that the [data] <u>faults</u> are sorted according to at least two parameters (13, 14), and that the [data] <u>faults</u> are represented in an image (12, 30) as a function of the parameters.

2. (Amended) Method according to claim 1, characterized in that the swatch in which [data] <u>faults</u> are [acquired] <u>detected</u> forms a rectangle whose sides extend parallel and perpendicularly to boundaries of the fabric.

3. (Amended) Method according to claim 1, characterized in that the extent of a detected fault in two directions (s, k) <u>of an area</u> in the fabric is provided as a parameter.

4. (Amended) Method according to claim 1, characterized in that the intensity (delta i) of a fault is provided as a <u>further</u> parameter.

5. (Amended) Method according to claim 1, characterized in that the form (23 - 29) of a fault is [provided] <u>represented</u> as a <u>further</u> parameter.

8. (Amended) Method according to claim [7] <u>6</u>, characterized in that values for [the] <u>a</u> detected number of faults in the fabric are associated with the classes.

9. (Amended) Method according to claim [7] <u>6</u>, characterized in that the classes are divided into groups by boundaries (97, 98).

REMARKS

The specification was amended to place the application in better form for examination to expedite prosecution.

The claims in this case have been amended to correspond with the set of claims which were the subject of International Preliminary Examination Report of 22 October 1999. The International Preliminary Examination Report indicates that the claims, as now presented, are novel and contain inventive steps. A copy of the German language Report is attached for the Examiner's convenience. When an English language translation becomes available, Applicants will forward a copy to the U.S. Patent and Trademark Office.

A favorable action is requested.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: _13 March 2000_   By: _William J Mathis_

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METHOD FOR EVALUATING DATA FROM TEXTILE FABRICS

The invention relates to a method for evaluating data determined on textile fabrics.

5   When producing textile fabrics such as woven fabrics, knitted fabrics, etc., faults which cause the ideally regular and precisely structured surface to exhibit irregularities or faults are a frequent occurrence. In terms of extent, faults of this kind may range from being very small and inconspicuous to very large or, for other reasons, conspicuous and may reduce the value and the function, e.g. the strength or the appearance of the fabric. The finished fabrics are therefore

10   subjected to an examination for the purpose of indicating faults in the structure. This may be a visual or a machine examination and often takes place both before dyeing or dressing and also before making up. An increase in the quantity of detected faults is to be expected in particular when carrying out a machine or automated examination, so that a correspondingly greater data flow may result.

15   One disadvantage in this case lies in the fact that, although a considerable amount of data is available, these data are likely to cause confusion and may not just serve to improve the quality of the products. It should also be borne in mind that there are a great many producers of textile fabrics of all kinds and that each producer and also many customers are inclined to define and implement their own

20   quality criteria. This means that textile fabrics which are assessed by different individuals or institutions result in assessments which cannot easily be compared with one another.

As characterized in the claims, the invention therefore achieves the object of providing a method by which items of data acquired from textile fabrics can easily be compared with one another and assessed and evaluated as to their significance in a differentiated manner.

5　　This is achieved by determining the data on a swatch of the surface of the fabric and sorting this data according to at least two parameters. A swatch can be understood to be the entire surface under consideration of a fabric or a section from the surface. A section of this kind may be moved or changed after a period required for acquiring the data, so that new data on other zones or swatches of the

10　fabric are periodically obtained. The intensity of a pixel or surface element, a longitudinal coordinate, a latitudinal coordinate, etc. may be considered as data and therefore also as parameters, for example. The acquired data are then represented in an image as a function of selected parameters, which in turn may be divided into zones which in themselves are conceived as homogeneous. If two

15　parameters are selected, the result is a one-dimensional representation. If three parameters are selected, the resulting image is a two-dimensional representation. The image then represents, for example, a classifying field consisting of individual fields which define a class. The class is characterized by the extent of the field, which lies in a plane which is regarded as the location for values of two

20　parameters. A further parameter may be displayed by symbols entered in the field.

The advantages achieved by means of the invention lie in particular in the fact that it enables a structured and standardized assessment of faults in textile fabrics to be carried out. Thus on the one hand values of predetermined

25　parameters for the most varied faults can be indicated, while on the other criteria can be created which help to identify the significance or value of the faults and to compare this with the value of other faults. A large data flow on faults in the

fabrics can thus also be processed to provide accurate information on the faults occurring.

The invention is illustrated in detail in the following on the basis of an example and with reference to the accompanying figures, in which:

5   Figure 1 shows a respective swatch of the surface of a textile fabric,

Figure 2 shows a respective swatch according to Figure 1 with different faults, and

Figures 3 to 11 in each case show a classifying field.

Figure 1 shows the same run 1 of a textile fabric three times with a fault 2.

10   Information on the position of this fault 2 can be obtained, for example, via coordinates x and y, on its size via values of the extent in two directions s and k, and on its intensity or deviation, for example in terms of color, from the surrounding area via a value delta i.

Figure 2 shows a respective swatch 3a, 3b of a textile fabric with a grid 4

15   and four different faults 5, 6, 7 and 8. The swatch 3a shows a first possibility for evaluating the size of the faults 5, 6, 7 and 8 and the swatch 3b a second possibility. For this purpose the grid 4 divides the swatches 3a, 3b into individual small fields 9, and the occupancy of these fields by the faults 5 - 8 is interpreted differently in the two swatches 3a and 3b, as will be discussed further in the

20   following. However in both cases this means that the extent of the faults through the number of occupied fields is selected as a parameter. Although - should this be a woven fabric - the faults 5, 6, 7, 8 extend in two directions, weftwise 10 and warpwise 11, the values of the parameters only indicate that the intensity of the faults 5 - 8 has exceeded a threshold value and one of the number of occupied

25   fields 9 has a proportional extent. The swatches 3a, 3b preferably form at least

one rectangle whose sides extend parallel and perpendicularly to boundaries of the fabric or run 1.

Figure 3 shows an image 12 with two axes 13, 14, along which values of parameters are plotted. Here the values along the axis 13 are values for the length

5 of a fault, for example viewed weftwise in a woven fabric, and those along the axis 14 values for the width of a fault, for example viewed warpwise in a woven fabric. Lines 15, 17, 19 and 21 divide the width of the faults into five classes, while lines 16, 18, 20 and 22 divide the length of the faults into five classes. This results overall in twenty five classes for classifying the faults according to size. Symbols

10 23 - 29 are drawn in at a plurality of class boundaries, which are indicated by the lines 15 - 22, these symbols representing the form of a fault as is to be expected on the basis of dimensions according to the said lines. Numerical values are also entered in the fields defined by the lines 15 to 22, these values indicating the number of detected faults which fall within the class concerned. For this purpose

15 it is assumed that a class represents a homogeneous zone, i.e. no distinction is made as to whether or not the values of the parameters lie near upper or lower class boundaries or lines 15 - 22.

Figure 4 shows an image 30 with axes and lines defining classes as is already known from Figure 3. The axes, lines and symbols have therefore been

20 given the same reference numbers. Dots 31, 32, 33, etc. are entered in the fields, the position of which dots in relation to the axes 13 and 14 indicates the size of the fault accurately or in a differentiated manner. Each dot therefore corresponds to a fault, and the distribution of the faults or the dots thereof is also an indication of the predominant type of fault in the fabric. Characters A to E are also entered

25 along the axis 13 between the lines 14 to 22 and integral numbers 1 to 5 along the axis 14 between the lines 13 to 21. Each field and therefore each class can therefore be clearly designated by the combination of a number and a character.

Figure 5 shows an image 34 with axes and lines defining classes as is already known from Figure 3. The axes, lines and symbols have therefore been given the same reference numbers. Diagonally ascending numerical values, which indicate the intensity of a fault, are provided in the individual fields, which correspond to

5   fault classes. Here the position of a figure indicates the intensity, while the value of the figure indicates the number of faults with this intensity. Thus numerical values located in the bottom left-hand side of a field indicate high intensities and numerical values located in the top right-hand side indicate low intensities.

Figure 6 shows an image 35 with axes 36 and 37. Values for the area of a fault,

10   for example in CM2, are plotted along the axis 36 and values for the intensity of a fault in percentages along the axis 37. This image 35 is also divided into fields or classes by lines 38 to 43. Symbols which indicate the intensity of the fault through the strength of the color are drawn in at the intersections of the lines 38 - 43. Numerical values in the fields indicate the number of faults occurring in the class

15   concerned.

Figure 7 shows an image 44 with axes 45 and 46. Values for the length of a fault, for example in cm, are plotted along the axis 41 and values for the intensity of a fault, for example in percentages, along the axis 46. This image 44 is also divided into fields or classes by lines 47 to 52. The number of detected

20   faults is indicated by the figures in the fields, as already known from Figure 3. Figure 8 shows an image 53 with axes 54 and 55. Values for the number of occupied fields 9 according to Figure 2 are plotted along the axis 54 and values for the intensity of a fault along the axis 55. This image 53 is also divided into fields or classes by lines 56 to 61. The number of detected faults is indicated by the

25   figures in the fields, as already known from Figure 3.

Figure 9 shows an image 62 with axes 63 and 64. Values for the length of faults in cm are plotted along the axis 63. The axis 64 is divided into a plurality of

zones 64a to e, and values for the intensity are given in percentages in each zone. Each of the zones 64a to 64e relates to a certain type of fault, for example the zone 64a relates to weft faults, the zone 64b to warp faults, the zone 64c to surface faults, the zone 64d to edge faults and the zone 64e to holes. Lines 65 to 78 again

5 divide the image 62 into fields or classes in which numerical values indicate the number of detected faults in the class concerned. The position of the numerical value in relation to the zone on the axis 64 indicates the intensity of the fault. Several numerical values may thus also occur in one class. The image 62 thereby illustrates a classification which is based on different types of fault. Different

10 known types of fault may be grouped together as desired. So, for example, the term "weft faults" is here generally understood to mean faults which predominantly extend weftwise in a woven fabric. Such faults are known under the following terms: join, fell, straightening point, shed, weft bar, lashing-in, slubber, fly, thread breakage, mispick.

15 Figure 10 shows an image 80 with an axis 81 which is divided into zones 81a to d. Values for intensities in percentages are given along another axis 82. Lines 83 to 93 divide the image 80 into fields or classes. Values for the number of detected faults can again be entered in the fields or classes. For example, the intensity of weft faults can be entered in zone 81a, the intensity of warp faults in

20 zone 81b, the intensity or size of holes in zone 81c, the intensity of edge faults, etc. in zone 81d, and the numbers thereof.

Figure 11 shows an image 94 with axes and lines as already found in images 12 and 30 (Figures 3 and 4). Here the fields or classes are divided by a boundary 97 into two groups 95 and 96, with the boundary extending along lines

25 15, 17, 19 and 16, 18, 20. However it is also possible to define a boundary 98 which also divides the individual fields or classes.

The method according to the invention is carried out as follows:

The textile fabric is scanned in a manner known per se, for example by a camera, and images for swatches of the surface of the fabric are made and signals derived therefrom are processed. Using algorithms, which do not constitute the subject

5   matter of this invention, for image processing, faults or unusual features in the images of the surface are determined from the derived signals by comparison with predetermined limit values, patterns, etc. Thus data on faults in a swatch of the fabric are produced. A swatch of this kind is shown, for example, in Figure 1 and called a run 1. A fault 2, which is distinguished by various parameters, can be

10   recognized in this. These parameters are its position, which is given by coordinates x and y, its size, which is given by the values s and k, and its intensity, which causes the fault to actually stand out from the area surrounding it and which is quantified by a qualitative datum, here called delta i.

Different parameters are significant, according to how the fault is

15   subsequently dealt with. For example, if every fault is to be removed, all that is of interest is its position, possibly also its size. If the fabric is then to be assessed as to where the faults are most numerous, such as at the edge, for example, it is again just the position which is of interest. The data are then sorted according to parameters such as length and width and accordingly represented in an image.

20   Should there be a requirement for assessing how the fault appears to the eye or how it influences subsequent processing of the fabric, such as dyeing or dressing, its size is of interest and possibly also its intensity. Then the parameters according to which the data are sorted are the length s and the width k of the fault, as well as its intensity delta i.

25   Just one dimension may be determined from the signals obtained from image processing in order to detect the size of a fault, or an evaluation according

to Figure 2 may be undertaken. In this case an investigation is carried out to establish how many fields 9 are affected or at least partly covered by a fault. These fields, as marked in swatch 3a, are counted for each fault and the number is plotted, for example, along the axis 54 in Figure 8. However it is also possible, as

5   shown for swatch 3b, to take the fields 9 occupied for each fault and to complete them to an extent such that together they form a rectangle which encompasses the fault. The fields 9 which are comprised in this rectangle then have to be counted and plotted.

       In order to detect the intensity of a fault, the color or brightness of the area

10   surrounding the fault is taken as a starting point and an attempt is made to quantify deviations of the color or brightness more or less accurately or in a graduated manner, this being expressed by a value delta i. The devices used for image processing determine the degree to which this is successful.

       In order to represent the size of the fault in an image, its length can be

15   detected in the swatch in a manner known per se and represented in an image 12, 30 by a value on the axis 13. The width of the fault can be represented in the same way by a value on the axis 14. Together these two values produce, for example, a dot 33 (Figure 4). This can be left as a dot or simply treated as a fault in class C2, which would mean that just one counting value would then be increased by one for

20   this class. For this purpose it is possible to specify certain fields or classes as acceptable and others as unacceptable beforehand. The position of the fault in image 13, 30 then immediately reveals how the fault is to be assessed. Should values for faults accumulate in individual classes, this will equally provide an indication for assessing the fabric.

25   The intensity of a fault can be represented according to the possibilities already presented on the basis of the images 34, 35, 44 and 53 (Figures 5 - 8).

As shown in Figure 1, swatches of the surface from which the data are acquired which form a rectangle are particularly suitable, for the fabrics in question are also already in the form of rectangles, this being a result of the manufacturing process. Then sides of the swatches should also lie parallel and

5   perpendicularly to the boundaries of the fabric. However the swatch concerned does not conventionally constitute the entire surface of the fabric. This applies to swatches 3a, 3b according to Figure 2, which is an enlarged view of a part of the run 1 according to Figure 1.

The form of a fault, as represented by the symbols 23 to 29 in Figure 3,

10   may also be directly considered as a parameter. In fact a parameter of this kind ultimately consists of two parameters (length and width). However it would also be possible to combine the parameter "form" with the parameter "intensity", as known from Figure 6, and in this way obtain another combination and therefore another image representation. It thus becomes obvious that only a few possibilities

15   are indicated here, although these can also be developed according to the invention in an obvious manner by combination, for example by interchanging the axes.

Data can be evaluated and, optionally, the textile fabric processed in a differentiated manner, according to whether the determined data belong to groups 95 or 96 (Figure 11), which are separated by a boundary 97, 98. For example, the

20   weighting of the faults in group 96 may be reduced with respect to the faults in group 95. Or faults of group 96 are only marked, for example, at the edge of a cloth run, while faults of group 95 are removed, for example by unraveling the woven fabric in the area around these faults. Generally speaking, boundaries 97, 98, etc. can form groups of classes or categories of faults which initiate different

25   actions.

Claims:

1.   Method for evaluating data determined on textile fabrics (1), characterized in that the data are determined on a swatch (3a, 3b) of the surface of the fabric, that the data are sorted according to at least two parameters (13, 14),

5   and that the data are represented in an image (12, 30) as a function of the parameters.

2.   Method according to claim 1, characterized in that the swatch in which data are acquired forms a rectangle whose sides extend parallel and perpendicularly to boundaries of the fabric.

10   3.   Method according to claim 1, characterized in that the extent of a detected fault in two directions (s, k) in the fabric is provided as a parameter.

4.   Method according to claim 1, characterized in that the intensity (delta i) of a fault is provided as a parameter.

5.   Method according to claim 1, characterized in that the form (23 -
15   29) of a fault is provided as a parameter.

6.   Method according to claim 1, characterized in that the image indicates at least two parameters for a fault.

7.   Method according to claim 1, characterized in that the image consists of fields, a class for the faults being associated with each field.

20   8.   Method according to claim 7, characterized in that value s for the detected number of faults in the fabric are associated with the classes.

9.   Method according to claim 7, characterized in that the classes are divided into groups by boundaries (97, 98).

Abstract

A process is disclosed for evaluating data obtained from textile fabrics. In order to devise a process which allows data obtained from textile fabrics to be easily compared, assessed in a differentiated manner as to their significance and evaluated, the data are determined in a section (3a, 3b) of the surface of the fabric, sorted according to at least two parameters (13, 14) and represented in an image (12, 13) as a function of the parameters.

5
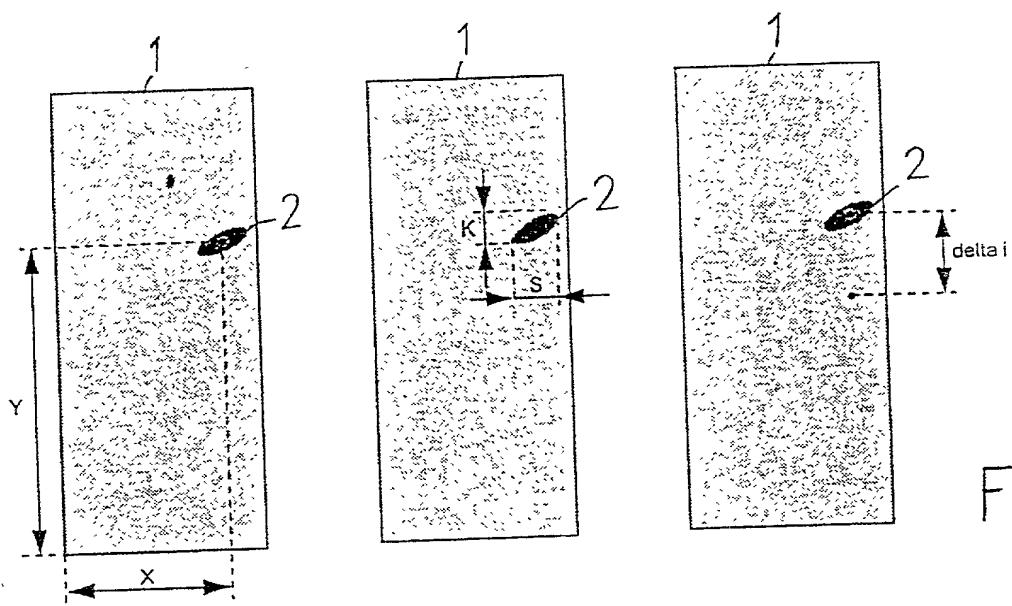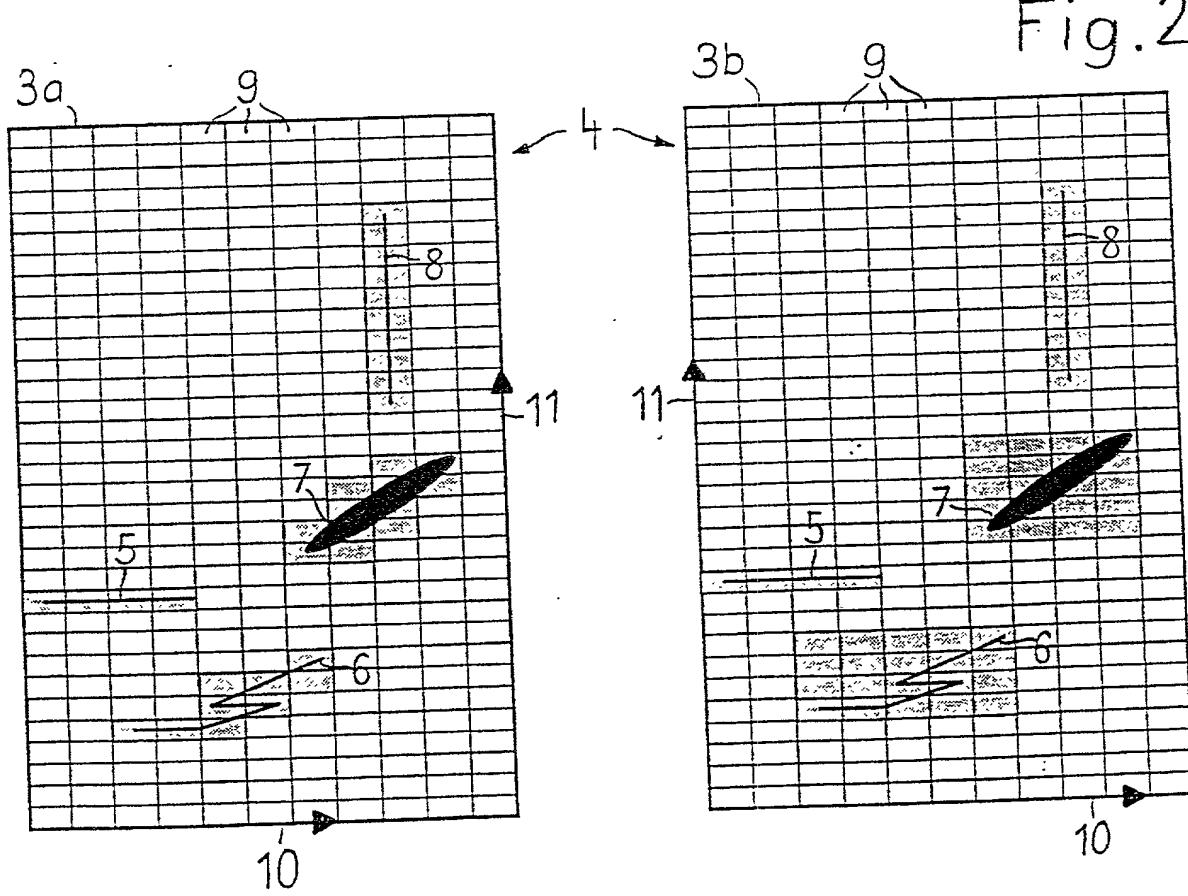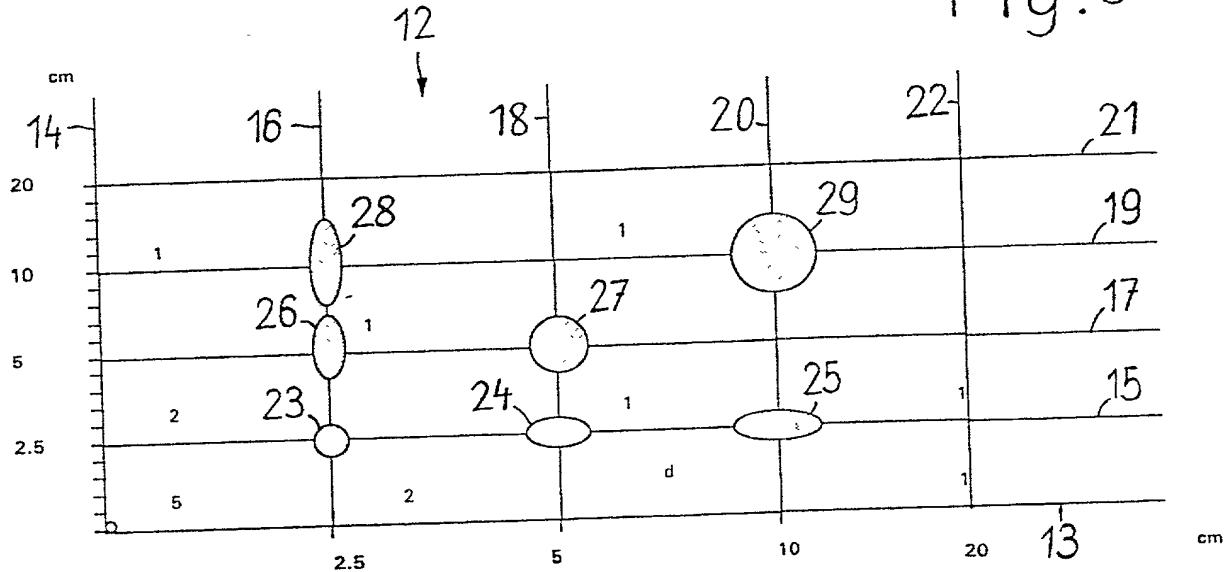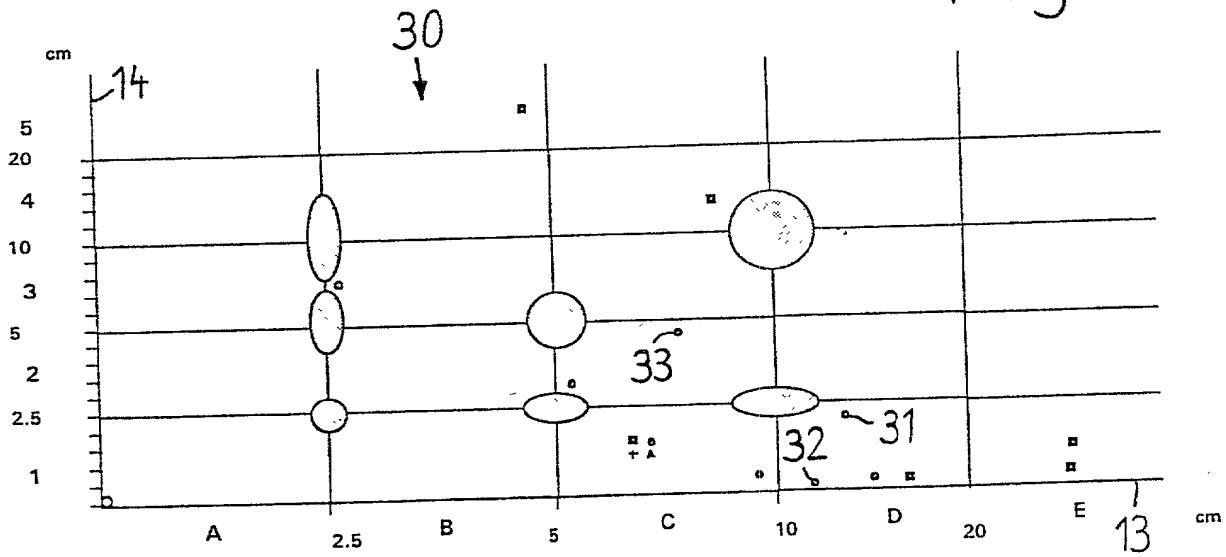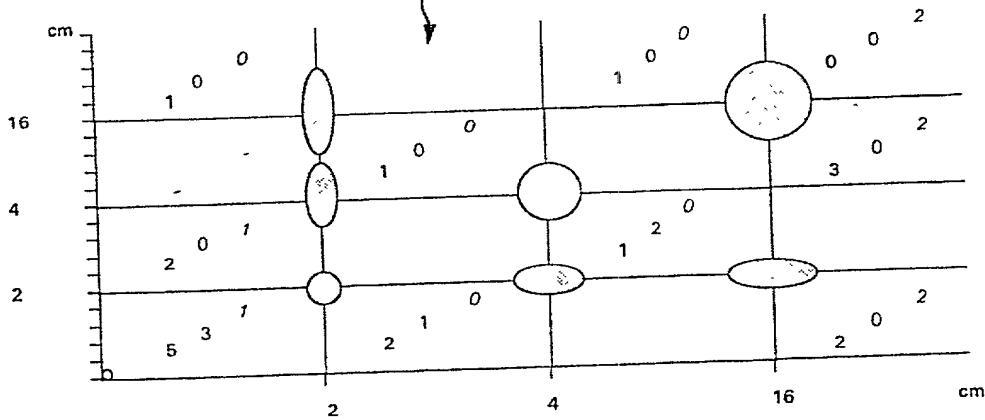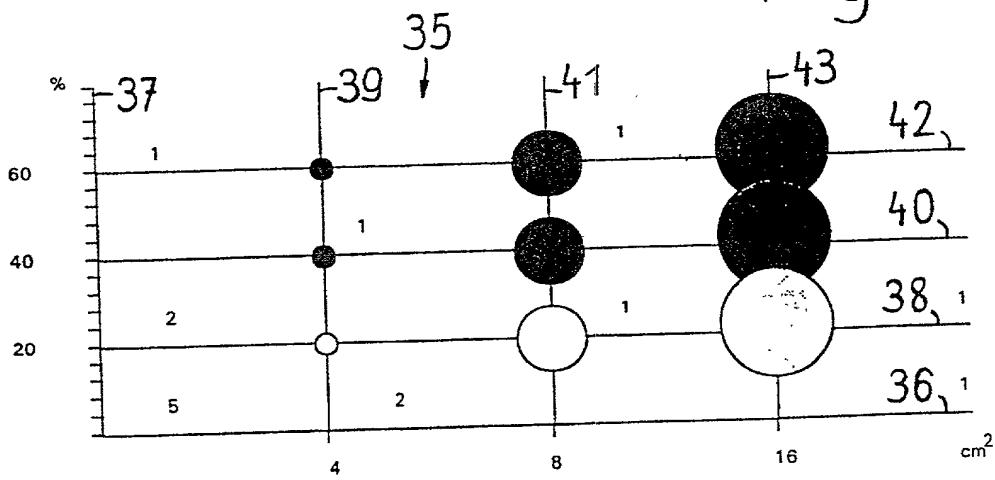
Fig.1

Fig.2

Fig.3

Fig.4

Fig.5

34

Fig.6

35

Fig.7

44

%	46	48	50	52	
	1		1	51	
60					
		1		49	
40					
	2		1	47	1
20					
	5	2		45	1
		4	8	16	cm

Fig.8

53

%	55	57	59	61	
	1		1	● 60	
60					
		1	●	58	
30					
	2	○	1	56	1
15					
	5	2		54	1
10	○				
		4	8	16	

Fig.9

62

66 68 70 72 74 76 73

64e → 100% / 0%   71

64d → 100% / 0%   69

64c → 100% / 0%   67

64b → 100% / 0%   65

64a → 100% / 0%   63

2,5   5   10   20   40   80   160   cm

Values in grid:
2 ... 1
2 ... 1
1
1
1
2 ... 1
1
5   6   3 ... 1
2

Fig.10

80

% 82   84   86   88   90

93
60   1   1
91
1   89
40   87
2   1   85
20   83
5   2   81

4   8   16   cm
81a   81b   81c   81d
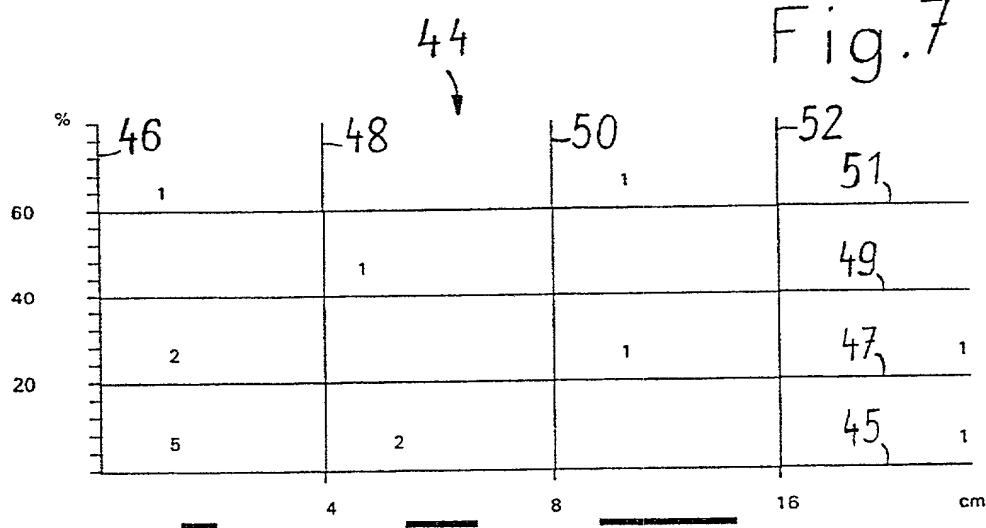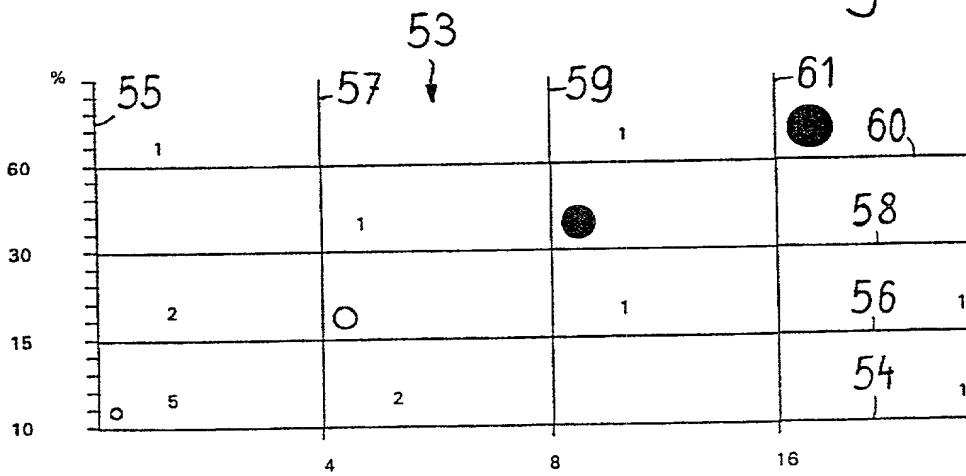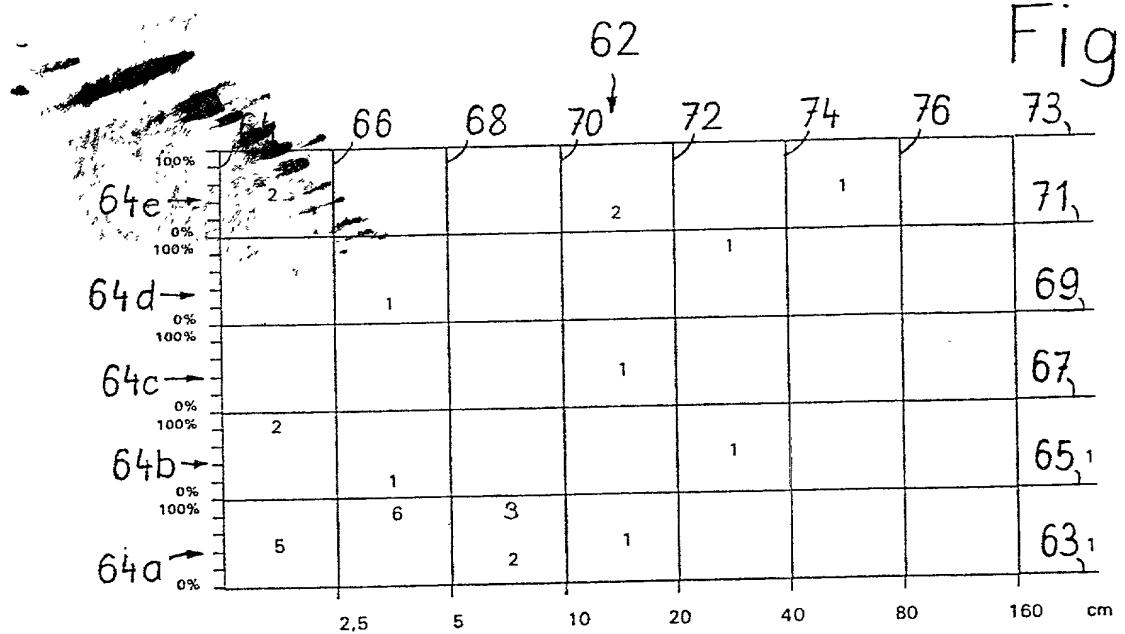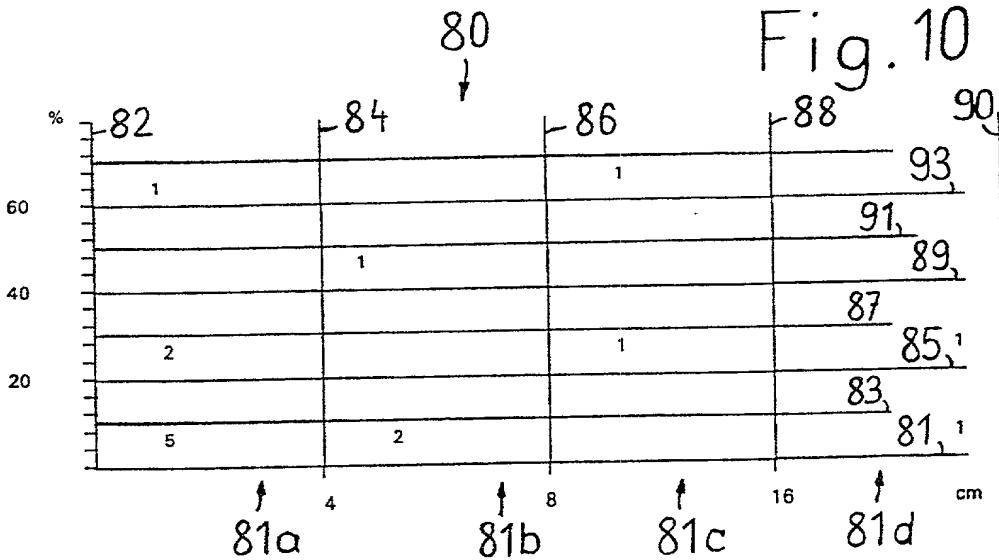
Fig. 11
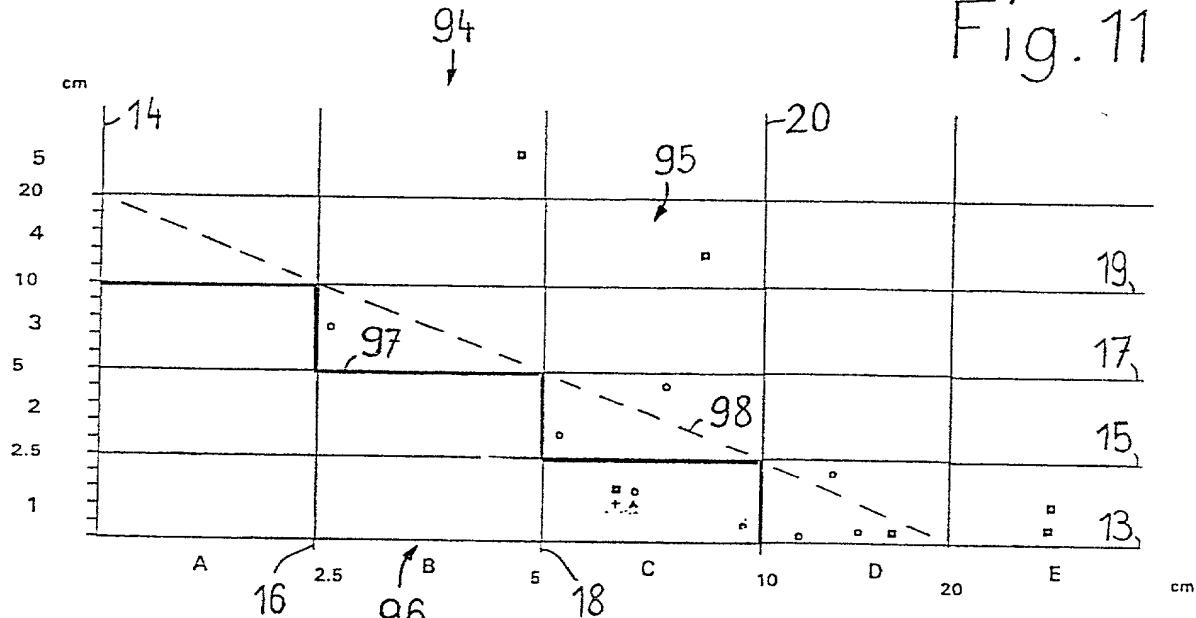
5·4 R~c ~ P~~PT~ 1 3 MAR 2000

Patent
Attorney's Docket No. 030705-164

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	)
	)
Rudolf MEIER et al.	) Group Art Unit: Unassigned
	)
Application No.: To Be Assigned	) Examiner: Unassigned
	)
Filed: Concurrently Herewith	)
	)
For: METHOD FOR EVALUATING DATA	)
FROM TEXTILE FABRICS	)

NOTICE OF INVENTORS' ADDRESSES

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

We have been informed that the current inventors' addresses are as follows.

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CH-8500 Frauenfeld
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Please incorporate this information in the appropriate records.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: _13 March 2000_   By: _William L Mathis_

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COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (Includes Reference to Provisional and PCT International Applications)	Attorney's Docket No. 030705-164

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROCESS FOR EVALUATING DATA FROM TEXTILE FABRICS

the specification of which (check only one item below):

☐ is attached hereto.

☐ was filed as United States application

Number _____

on _____

and was amended

on _____ (if applicable).

☒ was filed as PCT international application

Number __PCT/CH98/00343__

on __14 August 1998__

and was amended

on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(e) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. §119:

COUNTRY (if PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 U.S.C. §119
Switzerland	2167/97	15 September 1997	_X_ Yes ___No
			___Yes ___No
			___Yes ___No
			___Yes ___No
			___Yes ___No

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

_____   _____

(Application Number)   (Filing Date)

_____   _____

(Application Number)   (Filing Date)

(1/00)

<table>
<tr><td>COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D) (Includes Reference to Provisional and PCT International Applications)</td><td>Attorney's Docket No.
030705-164</td></tr>
</table>

I hereby claim the benefit under Title 35, United States Code, §120 of any United States applications(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Office all information known to me to be material to the patentability as defined in Title 37, Code of Federal Regulations §1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. §120:

U.S. APPLICATIONS		STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED

PCT APPLICATIONS DESIGNATING THE U.S.				
PCT APPLICATION NO.	PCT FILING DATE	U.S. APPLICATION NUMBERS ASSIGNED (if any)		

I hereby appoint the following attorneys and agent(s) to prosecute said application and to transact all business in the Patent and Trademark Office connected therewith and to file, prosecute and to transact all business in connection with international applications directed to said invention:

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Regis E. Slutter	26,999	Bruce J. Boggs, Jr.	32,344	Steven M. du Bois	35,023
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George A. Hovanec, Jr.	28,223	Richard J. McGrath	29,195	Fred W. Hathaway	32,236
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E. Joseph Gess	28,510	Michael G. Savage	32,596		

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

(1/00)

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D) (Includes Reference to Provisional and PCT International Applications)	Attorney's Docket No. 030705-164

FULL NAME OF SOLE OR FIRST INVENTOR	SIGNATURE	DATE
Rudolf MEIER	*Rudolf Ulr*	2/3/00

RESIDENCE	CITIZENSHIP
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FULL NAME OF SECOND JOINT INVENTOR, IF ANY	SIGNATURE	DATE
Jürg UHLMANN	*Jürg Uhl*	2.3.00

RESIDENCE	CITIZENSHIP

POST OFFICE ADDRESS

(1/00)